1:Stanford U. S-4,5 1936 AF14 Central China AF14

Table 4. The Inland Water Routes of Central-South China *

Unit: Km = Kilometers
Mi = Miles

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Waterway		Distance	Grade #
Yangtze River	Shanghai - Hankow	1,130 Km (700 Mi)	1
	Hankow - Ich'ang	673 Km (421 Mi)	2
	Ich'ang - Ipin	1,082 Km (676 Mi)	3
	Yüehyang - Hsiangyin	100 Km (63 Mi)	4
	Yüehyang - Ch'angte	206 Km (128 Mi)	5
Yüan-shui	Hsiangyin - Ch'angte	200 Km (125 Mi)	5
	Ch'angte - Shihping	861 Km (431 Mi)	5
Yu-shui	Yüanling - Yuyang	255 Km (159 Mi)	5
Li-shui	Tungting Lake - Ta'uli	152 Km (95 Mi)	5
	Li-hsien - Lin-li	55 Km (34 Mi)	5
Yun-shui	Yüanchiang - Shaoyang	350 Km (219 Mi)	5
Hsiang-ch'iang	Hsiangyin - Hsingan	776 Km (485 Mi)	4
	Hsingan - Tayungchiang	33 Km (21 Mi)	4
Han-shui	Hankow - Hanchung	271 Km (169 Mi	5
	Hanchung - Mienhsien	54 Km (34 Mi)	5
Kan	Nuk'ou - Tayü	630 Km (394 Mi)	5
	Tayü - Nanhsiung	29 Km (18 Mi)	5
Poyang Lake	Tuch'ang - Poyang	72 Km (46 Mi)	5
	Juihung - Yüshan	375 Km (234 Mi)	5
	Nanchang - Shankuan	250 Km (166 Mi)	5
Pearl River	Hong Kong - Canton	130 Km (81 Mi)	1
Yu	Canton - Ta'angwu	280 Km (176 Mi)	3
Hsün	Ta'angwu - Kueip'ing	196 Km (123 Mi)	4
Ch'ien	Kueip'ing - Shihlung	186 Km (116 Mi)	5

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Liu	Shihlung - Liuchou	189 Km (118 Mi)	5
Yü	Kueip'ing - Yungning	427 Km (267 Mi)	4
Tso	Yungning - P'ingerhai	379 Km (237 Mi)	5
Yu	Yungning - Poai	608 Km (380 Mi)	5
Pei	Sanshui - Shuhkéng	458 Km (286 Mi)	5
Tung	Canton - Polo	73 Km (46 Mi)	4
	Polo - Hoyüan	130 Km (81 Mi)	5
Kuei	Te'angwu - Tayungchiang	409 Km (256 Mi)	5
	Total	10,808 Km (6,755 Mi)	

* Hsing-cheng-yüan, Hsin-wen-chü, [Bureau of Information, Executive Yuan], Hang-tao- Kang [The Navigation-Route Network], Nanking, 1947, pp.23-40.

Grade 6 water routes are not included in this table. How rivers are graded for navigability isexplained below.

(Table 4 faces p. 769.) [b]

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V. INLAND WATER ROUTES

Next to railways, water routes play a very important role in transportation in Central-South China. The two major navigable rivers of this region are the Yangtze and Pearl rivers. Other minor waterways are tributaries of these two. Up to the end of 1950, there were 174 wholly or partly navigable waterways of different grades (according to tonnage carried) in the five provinces of Hunan, Hupeh, Kwangsi, Kwangtung, and Kiangsi, with a total distance of 29,130 kilometers (See Table 4.)

The waterways in Table 4 are navigable for steamers ranging from 300 to 10,000 gross tons. Those waterways below Grade 5 accommodate 60-ton steamers or wooden junks. The different grades of waterways are determined by the navigability of each river.[35]

35. The Navigation-route Network, pp. 3-5.

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Navigability Grading of River		
Rating	Depth of River	Tonnage of Carrier
Grade 1	5 to 8 meters (16' -26')	10,000 tons
Grade 2	3.8 meters (12')	2,000 tons
Grade 3	3.2 meters (11')	1,000 tons
Grade 4	2.8 meters (9')	600 tons
Grade 5	2.5 meters (8')	300 tons
Grade 6	1.5 meters (5')	60 tons

The section of the Yangtze River between Shanghai and Hankow and the section of the Pearl River between Canton and Hong Kong are considered Grade 1 water routes. Ocean steamers above 10,000 metric tons can move freely along these routes. On waterways graded from 2 to 5, small steamers may be used. Only wooden junks and small steamers below 60 tons can be employed in the Grade 6 rivers. The inland waterways have been much improved during the 5-year period of the Communist regime. Navigability of the inland waterways was estimated at 95,000 kilometers in 1955, representing an increase of 27 per cent [36] over 1950.

36. NCNA, Peking, May 7, 1955.

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VI. THE COASTAL SHIPPING ROUTES

In dealing with the subject of coastal shipping of Central-South China, the coastal shipping routes and the principal harbors are of first importance. Ten routes connect the South China ports. These are shown in Table 5. 505 487

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M 353 /41 cont./ Among the Miao there are five surnames: [184] [551] [354] [778] Wu, Lung, Liao, Shih, and Ma. The arrangement described above is a Lung house of someone with the surname. The families with other surnames place the fireplace, the kitchen stove, and the ancestral shrine on the right-hand room, just the opposite of the Lung surname families. In the two-room type of house the fire pit is in back of the middle pillar, and M 342 the stove is located in the room on the left (Illus. 16). The partition into two or three rooms is done by means of the pillars [353] [556] and not by walls or screens. In the houses of wealthy families side rooms are built on both sides of the main house (Illus. 17). [251] [231] If the side rooms should have two stories, then the top story is for the storage of grain and the ground floor for rearing domestic animals. The toilet space in a Miao house is often in the pig 514 pen or in the cow stall, and used both by men and women. Travelers in the Miao area find the using of the toilet a painful ordeal, because the stench is unbearable. Besides the M 251 storage loft the Miao house often has underground storage, dug underground about a chang deep and divided into two or three bins for storing foreign potatoes or sweet potatoes. After the sweet potatoes, etc. are stored underground, they are covered with a bamboo-plaited cover, to allow free circulation of air. If the potatoes spoil, it is necessary to wait for some time after M the bamboo covering has been removed before going down. [213] Or, one goes down with a light; if the light goes out, it indicates the presence of carbon dioxide, and one must refrain M 241 from entering. There is no difference between the agricultural implements used by the Miao and by the Chinese, but the 171 furniture in a Miao house is much smaller in size than those 352 used by the Chinese (Illus. 17).

M 487 Roads. — The communication system in the Miao area consists of land routes and waterways. The most important C waterway is the T'ung Ho, because it is navigable for a • 487 comparatively long distance, and it goes deep into Miao country. This river starts at Lu Ch'i and goes toward the mouth, extending 17 li to Su-mu Ch'i, ten more li to Hsien-ch'i-t'ang, another 21 li to Nung-t'an, 15 more li to T'an Ch'i, ten more

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/41 cont./

li to Ta-pi-liu, another ten li to Ch'e-ch'i, and 30 more li to Ho Ch'i. From the mouth of the river to Ho Ch'i, some 130 li, the waterway is known as the Wu Ch'i River. Above Ho Ch'i it divides into two branches, south and north: the northern branch, known as the Wan-yung Chiang, runs ten li to Chang-p'ai-chai, where it again divides into two more branches, one flowing westward as the Wan-yung Chiang proper, passing through Ta-chuang and Hsiao-chuang for 50 li to Kan-ch'eng. The other branch, which flows northwestward, is known as Kao-yen Ho, and goes 15 li to Chen-ch'i-so, 15 li to Hsien-chen-ying, ten li to Chen-ning-ying, 20 li to P'ing-lang, five li to Wei-che, eight li to Hsün-chien-p'ing, 20 li to Kao-yen-hsin. The branch flowing south of Ho Ch'i, known as the T'o Chiang, flows through Ch'i-k'ou, Chiang-chün-yen, and Mao Chou to Lao-hu-k'ou for about 60 li, and then passing Lao-hu-k'ou it flows from Mu-lung-ti Chiang to Feng-huang for another 70 li.

The parts of the T'ung Ho navigable by small craft are: the Wu Ch'i, 113 li; the Wan-yung Chiang, 60 li; /Illus. 16, 17 on pp. 42, 43/ /44/ the Kao-yen Ho, 93 li; and the T'o Chiang, 130 li; totaling 296 li in all. These river courses are difficult to navigate and are not passable all year round. Miao Fang-pei Lan in the section on roads and waterways says: "This river (the T'ung Ho) has precipitous cliffs standing up like daggers, strange rocks clustering like a forest of spears, and rioting cataracts. Through slight negligence a boat can be crashed into pieces. It dries up in autumn and winter, causing difficulty in transportation. It is only in summer when mountain streams rush down from the Miao villages, that small craft may ply here and there. However, the cliffs and rocks become more dangerous as the water rises. Once a sandbank is reached, a day is often spent in lifting the boat across to deep water. The difficulty of crossing such banks is twice as much as in other rivers."

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The Ch'en Chiang waterway starts from the city of Ch'en-ch'i-hsien and joins the Lo-hao Ch'i /tributary/ at Kao-ts'un

[text continues on p. 70]

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about 97 li away. When the water rises in the summer, the river is navigable by small crafts to Yen-men and Shin-yang-shao. The total cargo weight of a boat cannot exceed a few shih, and the boat has to be towed or lifted by boatmen wading through the sand and rocks. Although the distance is short, the voyage is very strenuous.

The 270 li of the Yu Chiang from Yüan-ling to Pao-ching is navigable by small craft, carrying cargo not over several shih in weight, and covering only about a dozen li per day. From Pao-ching the river empties into the Sung-t'ao Ho, and when the water rises in the summer, light boats can go as far as Hua-yüan and Mi-no at Yung-sui, and may even be able to reach the city of Sung-t'ao.

The boat used in the Miao area generally measures nine kung ch'ih in length, divided into seven holds, the middle hold being the widest, about one kung ch'ih in width (Illus. 18, 19). The oar, the paddle, the pole, the mast, and other attachments of the boat are not different from those seen elsewhere, except that at the bow there is a long paddle about six kung ch'ih long, which is used for coming down the sandbanks. Traveling upstream offers the greatest difficulty. Every time a sandbank is crossed, the boat has to be poled, lifted, towed, or pushed by several dozen men. Their chanting is as loud as the angry waves.

From the middle of the Ming period up to the beginning of the Ch'ing period, soldiers were sent into the Miao area. The most important duty of the military garrisons was to keep the communication lines open for troops and food supplies. So the construction of roads and bridges in the area appears monumental. There are four kinds of land routes: the main road connecting Yunnan with Kweichow is the official road; the roads connecting the various military posts are military roads; the roads traversed by the Chinese people are civilian roads; and the small winding paths leading to Miao settlements are Miao roads. Taking Feng-huang as the center, the official road leads